CLIPSAL®
INTEGRATED SYSTEMS

C-BUS® Wireless Systems

Control and Management System

CLIPSAL
C-Bus® Control and Management System

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Introduction to Wireless Systems

C-Bus® Wireless System
A retrofitable solution for home automation.

C-Bus® Wireless Wall Switches
Allows existing mains wall switches to be replaced with C-Bus® Wireless technology.

C-Bus® Wireless Gateway
Allows a C-Bus® Wireless network to be linked to a C-Bus® Cat-5 wired network.

C-Bus® Wireless Plug Adaptors

Allows devices plugged into 240V (or mains) General Purpose Outlets to be controlled using C-Bus® Wireless technology.

C-Bus® Wireless Remote

Allows control of C-Bus® Wireless Wall Switches and Plug Adaptors remotely.

Wireless Systems

C-Bus®
Wireless System

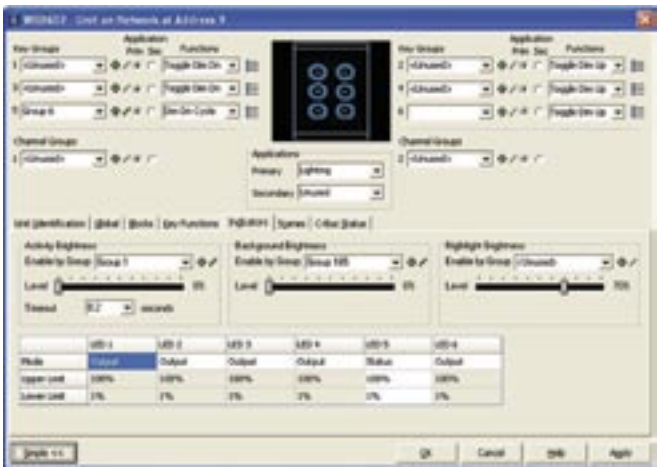
The C-Bus® Wireless product range incorporates a family of C-Bus® radio frequency (RF) devices, including Wall Switches, Plug Adaptors, a hand held Remote Control and a Gateway to Cat-5 Wired C-Bus® units.

C-Bus® Wireless Wall Switches are designed to easily replace standard mains wall switches. They incorporate patented Clipsal technology and are two wire devices requiring no neutral connection (mains active and load connections only).

All C-Bus® Wireless units incorporate Clipsal C-Bus'® unique Learn Mode functions for programming devices. Wall Switches, Plug Adaptors and the Gateway can also be programmed via the C-Bus® Toolkit software. Multiple C-Bus® Wireless units can be linked into a common network using Learn Mode.

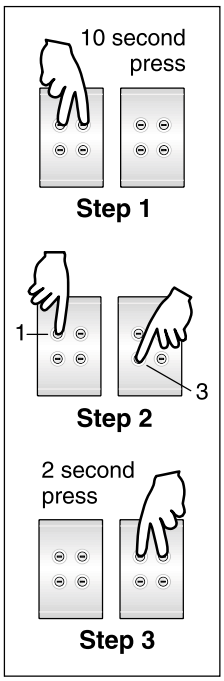
Associations can be created between buttons on multiple units, so that a button press on one unit will operate a button on another.

C-Bus® Wireless units include scene capabilities, which allow the user to perform a series of actions across multiple outputs by pressing a single button. For example, on arrival home a home owner could use a scene to switch on lights in the hallway, kitchen and lounge, and also switch on a heater.

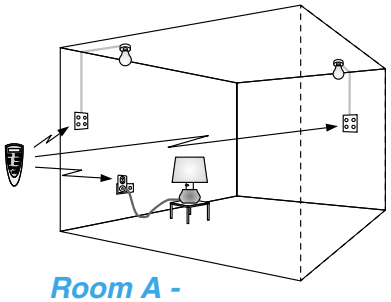


Programming a C-Bus® Wireless Unit via C-Bus® Toolkit Software

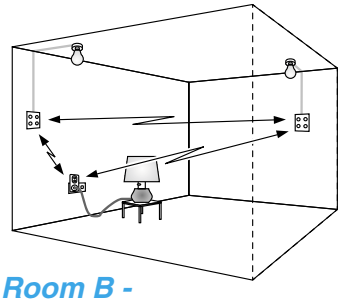
The diagrams below show two of the many possible basic C-Bus® Wireless installations. Room A uses stand-alone units, which can be switched via the Wireless hand held Remote Control. Room B uses networked units where buttons on one unit can operate other units or trigger scenes.



Grouping C-Bus® Wireless Units via Learn Mode



Room A -
Stand-alone C-Bus® Wireless Units



Room B -
Networked C-Bus® Wireless Units

Basic Operation

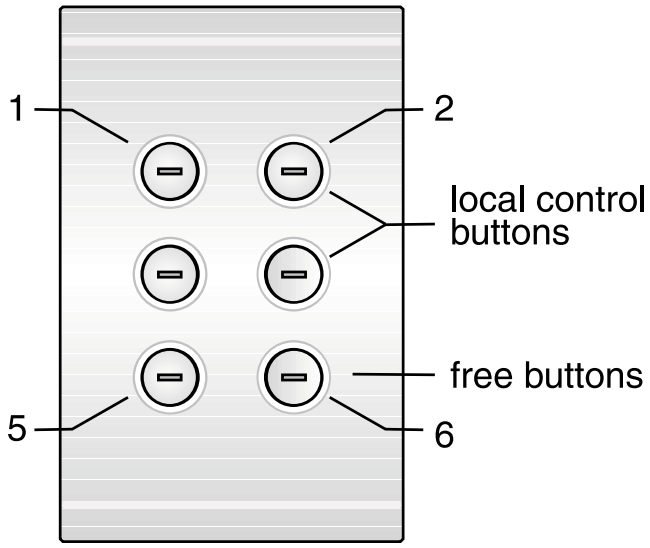
Buttons on a Wireless Wall Switch or Plug Adaptor are organised in pairs that control the output channels. Remaining pairs (free buttons) are used to control outputs on other units when multiple C-Bus® Wireless units are configured as part of a network. For example, the figure below shows a 6 button, 2 channel Saturn Wireless Dimmer unit. Its buttons perform the following functions:

- Buttons 1 and 2 control the first channel. (A quick press on either button toggles the channel on or off. A long press on button 1 or 2 dims up or down alternately)
- Buttons 3 and 4 control the second channel
- Buttons 5 and 6 are unused when the unit is used as a stand-alone unit. They may be used to control outputs on other units when part of a multi-unit network.

When a C-Bus® Wireless Wall Switch or Plug Adaptor is first installed, it functions as a stand-alone unit. In this basic default mode, the unit functions as a dimmer or switch, depending on the model.

C-Bus® Wireless Plug Adaptors have one output channel (a single, AC mains socket) and two buttons. Wall switches are available in one or two output channel versions, with two, four, six or eight buttons (eight button, Neo® only). Each channel controls one or more lights or other electrical devices connected to its output.

Two output channels



Wireless Systems

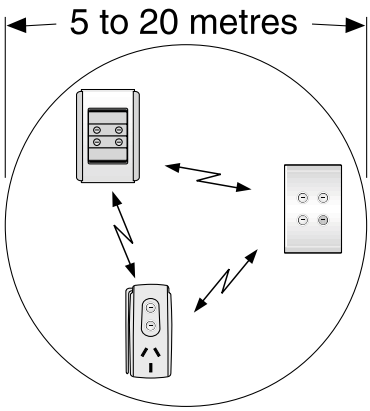
C-Bus® Wireless System

C-Bus® Wireless Networks

To experience the full capabilities of wireless operation, C-Bus® Wireless units are linked together to form a network.

To communicate with each other, all units within the same network should be located no further than 20 metres from each other. This distance depends on building materials used.

Up to 30 units may be connected within the same C-Bus® Wireless network.



C-Bus® Wireless Network Security

C-Bus® Wireless units optionally use 128-bit encrypted messages to communicate with each other. This results in a highly secure network.

Nearby C-Bus® Wireless Networks

It is possible to have several separate networks present alongside each other without interference, as each separate C-Bus® Wireless network has an automatically assigned, unique 'house code'.

C-Bus® Wireless Modes of Operation

C-Bus® Wireless units have five major modes of operation.

Mode 1

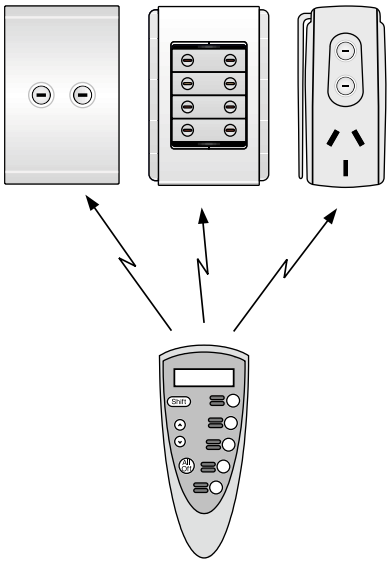
Stand-alone Mode

In this mode, C-Bus® Wireless Wall Switches and Plug Adaptors act as stand-alone dimmers or switches and make no use of the inbuilt wireless capabilities. No setup is required for this mode: Plug Adaptors simply plug into the mains, and Wireless Wall Switches are installed in place of existing wall switches, by a licensed electrician. The buttons on the units control the local dimming or switching channels of the unit only.

Mode 2

Simple Remote Controlled Mode

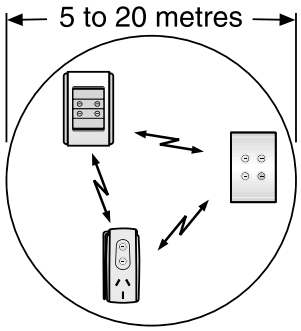
In this mode, a C-Bus® Wireless Wall Switch acts as a stand-alone dimmer or switch and a C-Bus® Wireless Remote Control operates the wall switch from a distance. This mode is simple to set up and is suitable for small installations where networking is not needed. C-Bus® Wireless Wall Switches or Plug Adaptors are controlled using a C-Bus® Wireless Remote; in this mode, the buttons on the Wireless Wall Switch control the local dimming or switching channels of the unit, and the remote control is linked to buttons on a wall switch using a Learn Mode operation. No PC is required to configure this mode.



Mode 3

Networked Mode

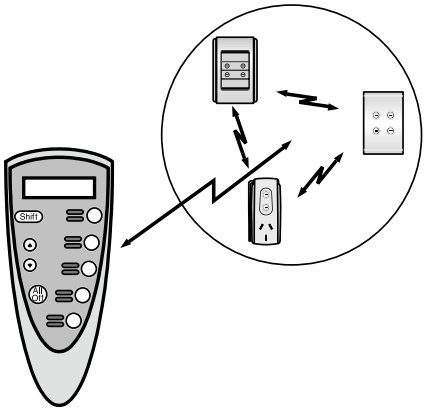
In this mode, a C-Bus® Wireless Wall Switch acts as a dimmer or switch and multiple C-Bus® Wireless units can be linked to each other with the C-Bus® Wireless technology. This mode is simple to set up, and is suitable for more complex installations. In this mode, local control buttons control the dimmer of the unit, and may also control other C-Bus® Wireless units. Free buttons can control the dimmer or switch channels of other units via a C-Bus® Wireless network established using Learn Mode. The operation of buttons is set using Learn Mode or using the C-Bus® Toolkit Software.



Mode 4

Networked with Remote

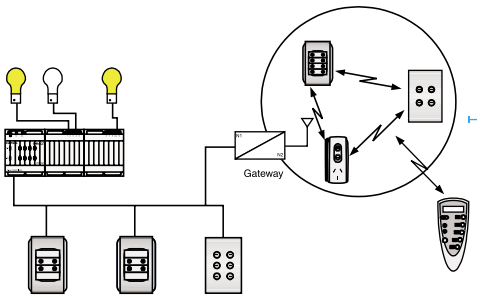
In this mode, a C-Bus® Wireless Wall Switch acts as a dimmer or switch and multiple C-Bus® Wireless units can be linked to each other via C-Bus® Wireless technology. Local control buttons control the dimmer of the unit, and may also control other C-Bus® Wireless units. Free buttons can control the dimmer or switch channels of other units via a C-Bus® Wireless network established using Learn Mode or the C-Bus® Toolkit software. Buttons on the Wireless Remote are linked to wall switch and plug adaptor buttons as desired.



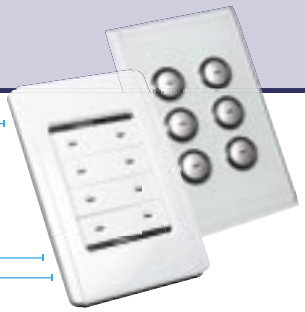
Mode 5

Networked Mode in Combination with Cat-5 Wired C-Bus® Units

The C-Bus® Wireless Gateway is used to link a C-Bus® Wireless network to a C-Bus® Cat-5 wired network. It is functionally equivalent to a C-Bus® Network Bridge. Using the Gateway, C-Bus® Wireless and Cat-5 networks can communicate and interact with each other. Both Wireless and Cat-5 networks use the same command structure, and are 100% compatible.



Wireless Systems



C-Bus®
Wireless Wall Switches
5850 and 5880 Series

C-Bus® Wireless Wall Switches allow existing, standard, mains wall switches to be replaced with a wall switch containing C-Bus® Wireless technology. C-Bus® Wireless Wall Switches are able to communicate with other C-Bus® Wireless devices using radio frequency wireless messaging, and form a C-Bus® Wireless network.

The Wall Switches are two-wire devices (mains active and load), with no neutral connection required. This enables the wall switches to be installed with minimal changes to the existing mains wiring.

The control buttons on the Wall Switches are able to control a load connected to the Wall Switch directly and can also control loads connected to other C-Bus® Wireless devices. Each control button can be programmed to function as an on/off switch, a dimmer, or can issue a scene ("Multiple Loads On or Off or to a Preset Level"), as well as a number of other options.

Features

- Replaces standard, existing wall switches
- Two-wire connection (no neutral required)
- Communicates directly with other C-Bus® Wireless devices
- Can be controlled via C-Bus® Cat-5 wired input units (via C-Bus® Cat-5 wired input units (such as touch screens), via a Gateway.
- Unique C-Bus® Wireless house code
- 128-bit encrypted communication
- Programmable via C-Bus® Learn Mode or the C-Bus® Toolkit software
- 1 channel and 2 channel versions
- Leading edge and trailing edge dimming units, 1 channel 500 VA or 2 channel 250 VA per channel
- Relay unit, 1 channel 8 A (fluorescent) rating and 2 channel 4 A (fluorescent) per channel
- Available in Neo® and Saturn style
- Saturn available in white, cream, mid-brown, and black
- Neo® available in white, cream, desert sand, brown, black, soft grey or mix and match your own.

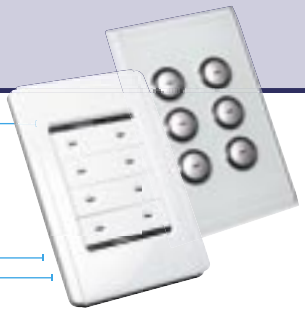
Neo®

Saturn

Product Specifications

Electrical Specifications	2-Wire Leading Edge Dimmers – 1 & 2 Channel
Supply voltage	220 to 240 V a.c. @ 50 Hz
Min. load per channel	25 W lamp or 0.25 a fan motor
Max. load per channel	500 W, 2 A (single channel unit) 250 W, 1 A (two channel unit)
Load Rating **Incandescent / halogen** **Iron core LV lighting** **Fan motors**	 2 A 2 A 2 A
Off state power consumption	0.5 W
Off state leakage current	12 mA Channel 1, 5 mA Channel 2
Electrical Specifications	**2-Wire Trailing Edge Dimmers – 1 & 2 Channel**
Supply voltage	220 to 240 V a.c. @ 50 Hz
Min. load per channel	25 W Lamp
Max. load per channel	500 W, 2 A (single channel unit) 250 W, 1 A (two channel unit)
Load Rating **Incandescent / halogen** **Electronic LV lighting**	 2 A 2 A
Off state power consumption	0.5 W
Off state leakage current	15 mA Channel 1, 10 mA Channel 2
Electrical Specifications	**2-Wire Switch Units – 1 & 2 Channel**
Supply voltage	220 to 240 V a.c. @ 50 Hz
Min. load per channel	25 W, 0.1 A
Max. total load	2000 W, 8 A
Load Rating **Incandescent / halogen** **Fluorescent [1]** **Iron core LV lighting** **Electronic LV lighting** **Fan motors**	 8 A 4 A 8 A 8 A 2 A
Off state power consumption	0.25 W
Off state leakage current	10 mA Channel 1, 0 mA Channel 2

[1] Fluorescent luminaire requires Power Factor Correction (PFC) capacitor fitted in order for switch unit to function correctly.



C-Bus®
Wireless Wall Switches
5850 and 5880 Series

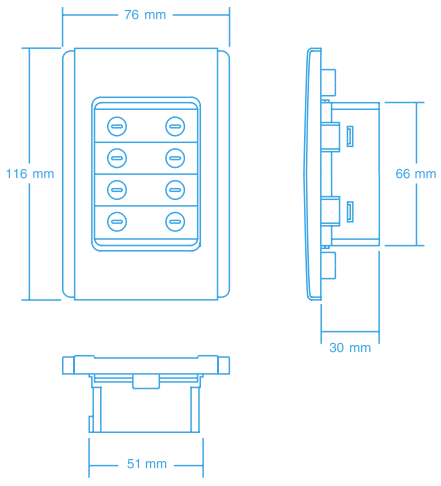
Product Specifications

RF C-Bus® Specifications	
RF Frequency	**433.92 MHz**
Transmitting power	1 mW
Typical range **(Range depends on building construction and the proximity to dense or metallic objects)**	15 to 20m (in buildings with timber frame/brick veneer construction) 10 to 15m (in buildings with brick, stone or steel frame construction) 5 to 10m (in buildings with steel reinforced concrete construction)
Control functions	Load switching, dimming (LE / TE only), timer, relay
Status indicator	Orange
Warm-up time	5 seconds

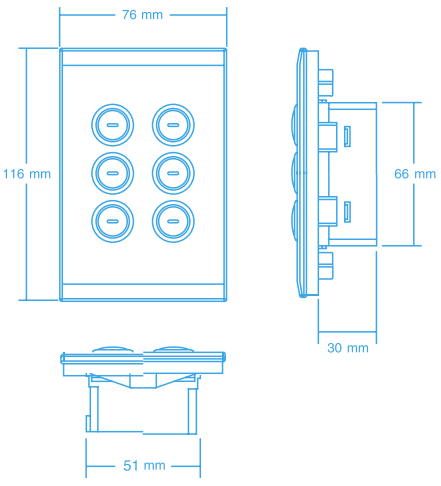
Mechanical Specifications	Neo®	Saturn
Dimensions (W x L x D)	**76 x 116 x 38.5 mm**	**76 x 116 x 41 mm**
Mounting centres	84 mm	
Weight	133 g	186 g

Environmental Specifications	
Operating temperature range	0 to 40 ºC
Operating humidity range	10 to 95% RH

Neo®



Saturn



Product Range

C-Bus® Wireless Wall Switch Dimmers					
Channels	Type	Current	Part Number		
Neo®			2 Button	4 Button	8 Button
1	Leading Edge	2 A	5852D2L1AA	5854D2L1AA	5858D2L1AA
2	Leading Edge	1 A	–	5854D1L2AA	5858D1L2AA
1	Trailing Edge	2 A	5852D2T1AA	5854D2T1AA	5858D2T1AA
2	Trailing Edge	1 A	–	5854D1T2AA	5858D1T2AA
1	Leading Edge	2 A	E5852D2L1TA	E5854D2L1TA	E5858D2L1TA
2	Leading Edge	1 A	–	E5854D1L2TA	E5858D1L2TA
1	Trailing Edge	2 A	E5852D2T1TA	E5854D2T1TA	E5858D2T1TA
2	Trailing Edge	1 A	–	E5854D1T2TA	E5858D1T2TA
Saturn			2 Button	4 Button	6 Button
1	Leading Edge	2 A	5882D2L1AA	5884D2L1AA	5886D2L1AA
2	Leading Edge	1 A	–	5884D1L2AA	5886D1L2AA
1	Trailing Edge	2 A	5882D2T1AA	5884D2T1AA	5886D2T1AA
2	Trailing Edge	1 A	–	5884D1T2AA	5886D1T2AA
1	Leading Edge	2 A	E5882D2L1TA	E5884D2L1TA	E5886D2L1TA
2	Leading Edge	1 A	–	E5884D1L2TA	E5886D1L2TA
1	Trailing Edge	2 A	E5882D2T1TA	E5884D2T1TA	E5886D2T1TA
2	Trailing Edge	1 A	–	E5884D1T2TA	E5886D1T2TA

C-Bus® Wireless Wall Switch Relays				
Channels	Current	Part Number		
Neo®		2 Button	4 Button	8 Button
1	8 A	5852R8F1AA	5854R8F1AA	5858R8F1AA
2	4 A	–	5854R4F2AA	5858R4F2AA
1	8 A	E5852R8F1TA	E5854R8F1TA	E5858R8F1TA
2	4 A	–	E5854R4F2TA	E5858R4F2TA
Saturn		2 Button	4 Button	6 Button
1	8 A	5882R8F1AA	5884R8F1AA	5886R8F1AA
2	4 A	–	5884R4F2AA	5886R4F2AA
1	8 A	E5882R8F1TA	E5884R8F1TA	E5886R8F1TA
2	4 A	–	E5884R4F2TA	E5886R4F2TA

C-Bus®
Wireless Plug Adaptors
5812 Series

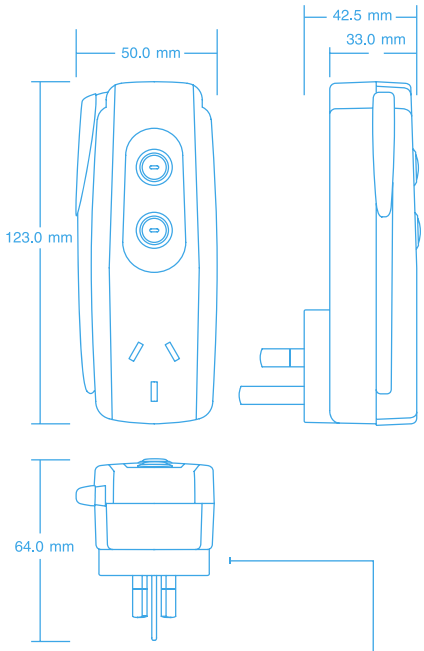
C-Bus® Wireless Plug Adaptors allow devices normally plugged into mains general purpose outlets (for example, lounge or bedside lamps) to be controlled using C-Bus® Wireless technology. C-Bus® Wireless Plug Adaptors are able to communicate with other C-Bus® Wireless devices (such as Wireless Wall Switches) using radio frequency wireless messaging, to form a C-Bus® Wireless network.

C-Bus® Wireless Plug Adaptors plug into existing power outlets, and the device to be controlled via C-Bus® Wireless then piggybacks into the plug adaptor. No additions or alterations to existing wiring are required.

C-Bus® Wireless plug adaptors are available in leading edge dimming and trailing edge dimming models, as well as a relay output version.

Features

- Plugs into a standard Australian general purpose electrical outlet
- Communicates directly with other C-Bus® Wireless devices.
- Separate leading edge and trailing edge dimming units available
- Relay output version available
- Integral, easily accessible control/override/programming buttons
- Can be controlled via C-Bus® Cat-5 wired input units (via C-Bus® Cat-5 wired input units (such as touch screens),via a Gateway.
- Unique C-Bus® Wireless house code
- 128-bit encrypted communication
- Programmable via C-Bus® Learn Mode or the C-Bus® Toolkit software.



Product Specifications

Electrical Specifications	Plug Adaptor Dimmers (Leading Edge)
Supply voltage	220 to 240 V a.c. @ 50 Hz
Max. total load	750 W, 3 A
Load Rating **Incandescent / halogen** **Iron core LV lighting**	 3 A 3 A
Electrical Specifications	**Plug Adaptor Dimmers (Trailing Edge)**
Supply voltage	220 to 240 V a.c. @ 50 Hz
Max. total load	500 W, 2 A
Load Rating **Incandescent / halogen** **Electronic LV lighting**	 2 A 2 A
Electrical Specifications	**Plug Adaptor Switches**
Supply voltage	220 to 240 V a.c. @ 50 Hz
Max. total load	2400 W, 10 A
Load Rating **Incandescent / halogen** **Fluorescent** **Iron core LV lighting** **Electronic LV lighting** **Fan motors**	 10 A 4 A 10 A 10 A 2 A
Mechanical Specifications	
Dimensions (W x H x D)	50 x 123 x 64 mm
Weight	118 g

Product Range

Catalogue Number	Description
5812D3L1AA	Plug Adaptor Dimmer (Leading Edge)
5812D2T1AA	Plug Adaptor Dimmer (Trailing Edge)
5812R10F1AA	Plug Adaptor Switch

C-Bus®
Wireless Remote Control
5888 Series

The C-Bus® Wireless Remote Control allows a user to control buttons on C-Bus® Wireless Wall Switches and Plug Adaptors remotely. Unlike an infrared (IR) remote, it utilises radio frequency (RF) communication, therefore the user does not need to point it directly at the unit to be controlled.

Up to 10 separate wall switch or plug adaptor buttons can be controlled by the remote control. These can be on various units on different networks. A single button on a wall switch or plug adaptor can be controlled by up to two remote controls.

The remote control buttons are organised in two banks of five buttons. Banks are alternately selected by pressing the Shift button.

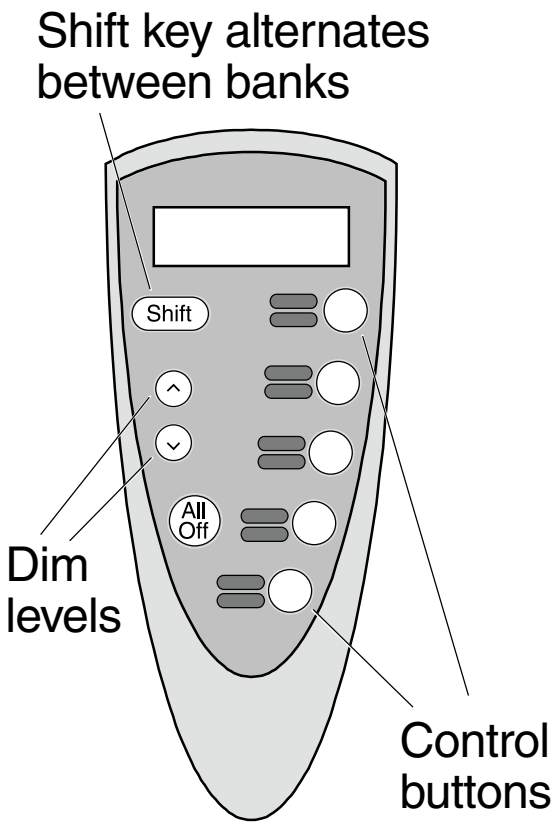
Up and Down buttons allow the user to dim the level associated with the last button selected (on dimmer units). An 'All Off' button provides a convenient way to switch off all buttons that have been associated with the remote control unit.

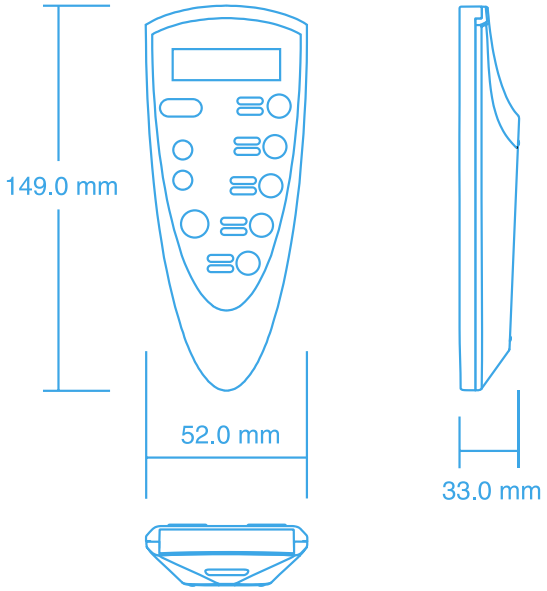
Features

- Five programmable function buttons, with Shift button providing five more programmable functions
- C-Bus® Wireless groups and scenes can be controlled from the remote control
- Up, Down, Off and Shift buttons
- Blue LED backlight
- LCD display
- Button labelling
- Transmit indicator
- 20 to 25 m range (typical)
- Programming / Learn switch
- A single C-Bus® Wireless unit can be controlled by 1 or 2 remote controls
- A button on a remote control can be linked to several different C-Bus® Wireless units
- Different buttons on the same remote control can be linked to different C-Bus® Wireless units.

Product Specifications

Electrical Specifications	
RF frequency	433.92 MHz
Transmitting power	10 mW
Typical range	20 to 25 m
Maximum range	70 m (free air)
Backlighting	Blue LEDs
Display	LCD
Batteries	2 x AAA
Mechanical Specifications	
Dimensions (W x H x D)	52 x 149 x 33 mm
Weight	87 g (including batteries)





Product Range

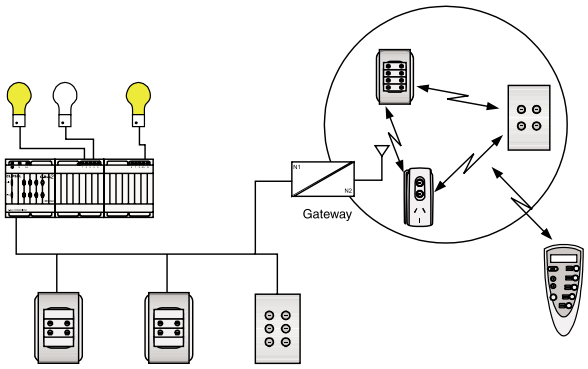
Catalogue Number	Description
5888TXBA	C-Bus® Wireless Hand Held Remote

C-Bus®
Wireless Gateway
5800 Series

The C-Bus® Wireless Gateway is used to link a C-Bus® Wireless network to a C-Bus® Cat-5 wired network. It is functionally equivalent to a C-Bus® Network Bridge. Using the Gateway, C-Bus® Wireless and Cat-5 networks can communicate and interact with each other. Both Wireless and Cat-5 networks use the same command structure.

The Gateway allows:

- Control of a C-Bus® Wireless network, via control units on a C-Bus® wired network, or from software such as Schedule Plus or HomeGate
- Control of output units and electrical loads in one network type, from input units (such as switches) in the other network type.



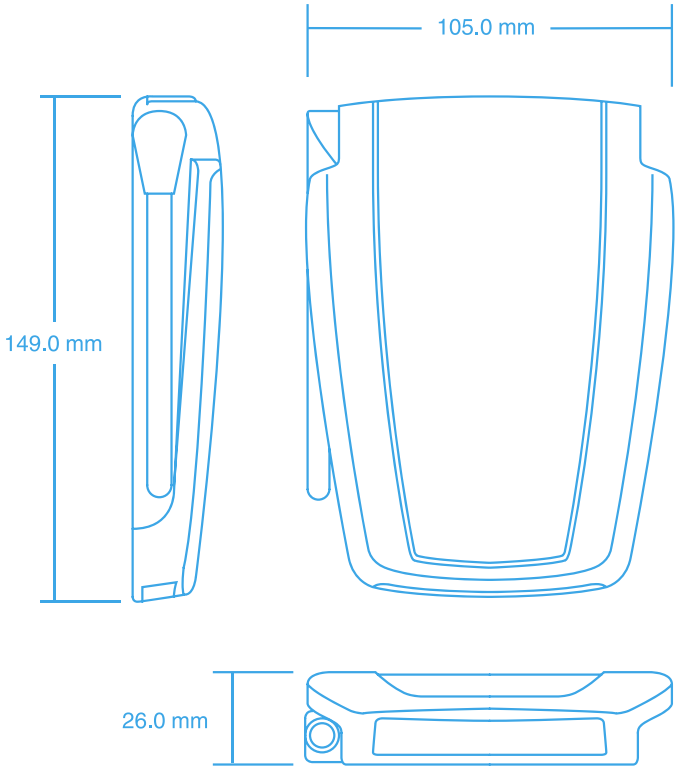
A Gateway links Cat-5 wired and wireless networks together (or C-Bus wireless)

Features

- Allows seamless communication between a wired C-Bus® network and a C-Bus® Wireless network
- Desktop or wall mounted
- A C-Bus® Cat-5 cable connected to the wired C-Bus® network is plugged into an RJ45 socket at the rear of the Gateway
- Power for the Gateway is provided by the wired C-Bus® network, no additional power source is required
- The connection to a C-Bus® Wireless network is accomplished by a C-Bus® Learn Mode operation
- The connection to a C-Bus® Cat-5 wired network requires the use of the C-Bus® Toolkit software
- The Gateway supports routing of messages into and through both wired and wireless networks
- Messages on each network (such as button presses) can be passed through to the adjacent network.

Product Specifications

Electrical Specifications	
Parameter	**Description**
C-Bus® supply voltage	15 to 36 V d.c., 32 mA
RF frequency	433.92 MHz
Transmitting power	1 mW
Typical range	15 to 20 m
Maximum range	50 m (open air)
Operating temperature range	0 to 40 °C
Operating humidity range	10 to 95% RH
Mechanical Specifications	
Parameter	**Description**
Dimensions (W × H × D)	105 × 149 × 26 mm
Weight	105 g
Fixing centres	40 mm



Product Range

Catalogue Number	Description
5800WCGA	Wireless Gateway

CLIPSAL®
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